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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 142464	Applicant(s) Ikegami
	Examiner M. Budd	Group Art Unit 2834

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

X Responsive to communication(s) filed on 11-20-00.

This action is **FINAL.**

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

X Claim(s) 1-3-14 and 16-26 is/are pending in the application.

Of the above claim(s) 8-13 and 21-26 is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

X Claim(s) 1, 3-7, 14 and 16-20 is/are rejected.

Claim(s) _____ is/are objected to.

Claim(s) _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The proposed drawing correction, filed on _____ is approved disapproved.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____.

Attachment(s)

Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

Interview Summary, PTO-413

Notice of References Cited, PTO-892

Notice of Informal Patent Application, PTO-152

Notice of Draftsperson's Patent Drawing Review, PTO-948

Other _____

Office Action Summary

Claims 1, 3-7, 14 and 16-20 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 3-7, 14 and 16-20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, has possession of the claimed invention. There is no description or illustration in the original disclosure of a structure where the piezoelectric resonator is attached to an end of the U-shaped opening--- and/or "attached--- on the side facing the support elements". The original disclosure teaches a device fully attached to the U-shaped opening on a side of the piezoelectric element. However neither side of the piezo element faces the support member #11. The only gap disclosed is between an end of the piezo element and the support #11 as clearly shown by applicants figs. 1 and 2. Contrary to the statement in applicants remarks, the examiner did not agree that the claim language described applicants figs. 1 and 2. As noted above it clearly does not. As was further explained to applicant represent active at the interview of 10-4-00, the U-shaped opening is completely filled with conductive resin and therefore is not disclosed as being coupled at only an end of the opening.

Claims 1, 3-7, 14 and 16-20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims are vague and indefinite, inaccurate or incomplete. In claim 1, only a single electrode is claimed (inoperative device/and/or incomplete) and it only "opposes" the element surface: is it attached? There is no clear proper antecedent basis for "side" of the piezo element or what constitutes an "end" of the U-shaped opening. The examiner assumes that one "end" of a U could be the 'crotch" area and the other end the tops of the "tines": is this what applicants mean? Regardless, the claim language gives no clues, and is therefore vague and indefinite.

Claims 4-6 and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims are vague and indefinite in that it is unclear whether or not a fixing layer is included in the completed finished device claimed. It is unclear whether applicant is attempting to claim an intermediate product, separate from the finished structure of e.g. claims 1 and 14. Thus one cannot determine the metes and bounds of these claims. Contrary to the statement in applicants remarks it was not agreed in the 10-4-00 interview that the final structure included the fixing layer. The examiners recollection is exactly the opposite: that the fixing layer is merely temporarily present during manufacture and not present in the finished product. This is consistent with applicants disclosure. Note for example applicants specification, page 10, last paragraph thru page 11. Thus it is still unclear what applicant intends

the metes and bounds of these claims to be. Does one go by the disclosure, or by the statements made in the amendment remarks? Either way, the claim language is unclear.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 3-7, 14 and 16-20 (as understood) rejected under 35 U.S.C. 102(a) as being clearly anticipated by Nakata (figs. 2, 8, 9, 16, 30, 34, 43 and 45) or Japan (821) (fig. 4).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-7, 14 and 16-20 (as understood) rejected under 35 U.S.C. 103(a) as being unpatentable over Japan (077) in view of Scott, German (643) or Ogiso.

Japan (077) teaches the resonator and mounting structure except for the provision of a gap between the piezo element and the support member. However, each of Scott, German and Ogiso explicitly teach providing such a gap. While the omission of contact between the piezo element and the base would yield a lower strength connections it would isolate the piezo element from external vibrations, lower temperature induced stresses (due to material coefficient

mismatch), use lass material and leave the crystal resonator undamped. Thus, for at least these reasons it would have been obvious to one of ordinary skill in the art to provide Japan (077) with a gap between the piezo resonator and the support member.

Regarding applicants remarks, the examiner is confused by applicants traversal of a rejection at method claims 8-12 as these claims have not been rejected: they are withdrawn as non-elected, along with the other method claims 21-26.

Budd/nt

1-10-01